RECEIVED

Yee &
Associates, P.C.

4100 Alpha Road
Suite 1100
Dallas, Texas 75244

CENTRAL FAX CENTER

DEC 2 8 2004

Main No. (972) 385-8777
Facsimile (972) 385-7766

Facsimile Cover Sheet

To: Commissioner for Patents for **Examiner Ashokkumar B. Patel Group Art Unit 2154**	Facsimile No.: **703/872-9306**
From: Monica Gamez for Carrie Parker Legal Assistant to Wayne P. Bailey	No. of Pages Including Cover Sheet: **26**

Message:

Enclosed herewith:

• Transmittal Document; and
• Appeal Brief.

Re: Application No. 09/692,354

Attorney Docket No: AUS9-2000-0625-US1

Date: Tuesday, December 28, 2004

| **Please contact us at (972) 385-8777 if you do not receive all pages indicated above or experience any difficulty in receiving this facsimile.** | *This Facsimile is intended only for the use of the addressee and, if the addressee is a client or their agent, contains privileged and confidential information. If you are not the intended recipient of this facsimile, you have received this facsimile inadvertently and in error. Any review, dissemination, distribution, or copying is strictly prohibited. If you received this facsimile in error, please notify us by telephone and return the facsimile to us immediately.* |

PLEASE CONFIRM RECEIPT OF THIS TRANSMISSION BY FAXING A CONFIRMATION TO 972-385-7766.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Neal et al.** §	Group Art Unit: **2154**
§	
Serial No.: **09/692,354** §	Examiner: **Patel, Ashokkumar B.**
§	
Filed: **October 19, 2000** §	Attorney Docket No.: **AUS9-2000-0625-US1**
§	
For: **System Area Network of End-to-** §	
End Context via Reliable Datagram §	
Domains §	

35525

PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

TRANSMITTAL DOCUMENT

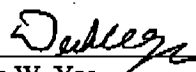Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:
ENCLOSED HEREWITH:

- Appeal Brief (37 C.F.R. 41.37).

A fee of $500.00 is required for filing an Appeal Brief. Please charge this fee to IBM Corporation Deposit Account No. 09-0447. No additional fees are believed to be necessary. If, however, any additional fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,

Duke W. Yee

Duke W. Yee
Registration No. 34,285
YEE & ASSOCIATES, P.C.
P.O. Box 802333
Dallas, Texas 75380
(972) 385-8777
ATTORNEY FOR APPLICANTS

RECEIVED
CENTRAL FAX CENTER

DEC 2 8 2004

Docket No. AUS9-2000-0625-US1   *PATENT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Neal et al.**   §
                                               §   Group Art Unit: **2154**
Serial No. **09/692,354**   §
                                               §   Examiner: **Patel, Ashokkumar B.**
Filed: **October 19, 2000**   §
                                               §
For: **System Area Network of End-to-**   §
End Context via Reliable Datagram   §
Domains   §

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on October 28, 2004.

The fees required under § 41.20(B)(2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

(Appeal Brief Page 1 of 24)
Neal et al. – 09/692,354

PAGE 3/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

(Appeal Brief Page 3 of 24)
Neal et al. – 09/692,354

STATUS OF CLAIMS

A.   TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-21

B.   STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: none
2. Claims withdrawn from consideration but not canceled: none
3. Claims pending: 1-21
4. Claims allowed: none
5. Claims rejected: 1-21

C.   CLAIMS ON APPEAL

The claims on appeal are: 1-21

(Appeal Brief Page 4 of 24)
Neal et al. – 09/692,354

PAGE 6/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

STATUS OF AMENDMENTS

No amendment after final was filed for this case.

(Appeal Brief Page 5 of 24)
Neal et al. — 09/692,354

PAGE 7/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

In a system area network (SAN) communication system, a message passing mechanism is provided. Consumers access SAN message passing hardware by posting send/receive messages to send/receive work queues on a SAN channel adapter. The send/receive work queues are assigned to a consumer as a queue pair. Messages can be sent using many different types of transports – one of such transports being Reliable Datagram. Claim 1 is directed to a method for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter, thus eliminating the need to associate a given Reliable Datagram queue pair to a specific SAN partition. The invention of Claim 1 thus advantageously provides an enhancement to the SAN Reliability Datagram transport which allows reliable datagram queue pairs to communicate on multiple SAN partitions (Specification page 5, last paragraph; page 27, first full paragraph).

Specifically, Claim 1 provides a method for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter. As a part of such association, a reliable datagram domain is stored within the reliable datagram queue pair context. In addition, *this same reliable datagram domain* is stored within the end-to-end context. In order to advantageously enable reliable datagram queue pairs to communicate on multiple SAN partitions, a partition key is also stored *within this same end-to-end context* (Specification page 24, last paragraph; Figure 8). By storing the partition key in this same end-to-end context, instead of being stored in the queue pair context, there is no need to check the partition key of incoming packets against all partition keys that a particular host channel adapter has access to, which in the past was hardware resource prohibitive (Specification page 24, second full paragraph). Thus, greater partitioning flexibility is provided by the present invention by enabling queue pairs of a SAN transport to communicate directly on multiple partitions.

B. CLAIM 10 - INDEPENDENT

In a system area network (SAN) communication system, a message passing mechanism is provided. Consumers access SAN message passing hardware by posting send/receive messages to send/receive work queues on a SAN channel adapter. The send/receive work queues are

(Appeal Brief Page 6 of 24)
Neal et al. – 09/692,354

PAGE 8/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

assigned to a consumer as a queue pair. Messages can be sent using many different types of transports – one of such transports being Reliable Datagram. Claim 10 is directed to a computer program product for use in a data processing system for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter, thus eliminating the need to associate a given Reliable Datagram queue pair to a specific SAN partition. The invention of Claim 10 thus advantageously provides an enhancement to the SAN Reliability Datagram transport which allows reliable datagram queue pairs to communicate on multiple SAN partitions (Specification page 5, last paragraph; page 27, first full paragraph).

Specifically, Claim 10 provides a computer program product for use in a data processing system for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter. As a part of such association, instructions are provided for storing a reliable datagram domain within the reliable datagram queue pair context. In addition, instructions are provided for storing *this same reliable datagram domain* within the end-to-end context. In order to advantageously enable reliable datagram queue pairs to communicate on multiple SAN partitions, instructions are also provided for storing a partition key *within this same end-to-end context* (Specification page 24, last paragraph; Figure 8). By storing the partition key in this same end-to-end context, instead of being stored in the queue pair context, there is no need to check the partition key of incoming packets against all partition keys that a particular host channel adapter has access to, which in the past was hardware resource prohibitive (Specification page 24, second full paragraph). Thus, greater partitioning flexibility is provided by the present invention by enabling queue pairs of a SAN transport to communicate directly on multiple partitions.

C.   CLAIM 19 – INDEPENDENT

In a system area network (SAN) communication system, a message passing mechanism is provided. Consumers access SAN message passing hardware by posting send/receive messages to send/receive work queues on a SAN channel adapter. The send/receive work queues are assigned to a consumer as a queue pair. Messages can be sent using many different types of transports – one of such transports being Reliable Datagram. Claim 19 is directed to a system for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter, thus eliminating the need to associate a given Reliable Datagram queue pair to a specific

SAN partition. The invention of Claim 19 thus advantageously provides an enhancement to the SAN Reliability Datagram transport which allows reliable datagram queue pairs to communicate on multiple SAN partitions (Specification page 5, last paragraph; page 27, first full paragraph).

Specifically, Claim 19 provides a system for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter. As a part of such association, means for storing a reliable datagram domain within the reliable datagram queue pair context is provided, as described at Specification page 5 last paragraph and page 24 last paragraph, and the corresponding structure is shown by representative elements 102 in Figure 1, 602 in Figure 6, and HCA A and HCA B in Figure 8. In addition, means for storing *this same reliable datagram domain* within the end-to-end context is provided, as described at Specification page 5 last paragraph and page 24 last paragraph, and the corresponding structure is shown by representative elements 102 in Figure 1, 602 in Figure 6, and HCA A and HCA B in Figure 8. In order to advantageously enable reliable datagram queue pairs to communicate on multiple SAN partitions, means for storing a partition key *within this same end-to-end context* are provided, as described at Specification page 5 last paragraph and page 24 last paragraph, and the corresponding structure shown by representative elements 102 in Figure 1, 602 in Figure 6, and HCA A and HCA B in Figure 8. By storing the partition key in this same end-to-end context, instead of being stored in the queue pair context, there is no need to check the partition key of incoming packets against all partition keys that a particular host channel adapter has access to, which in the past was hardware resource prohibitive (Specification page 24, second full paragraph). Thus, greater partitioning flexibility is provided by the present invention by enabling queue pairs of a SAN transport to communicate directly on multiple partitions.

D.   CLAIM 20 – DEPENDENT MEANS-PLUS-FUNCTION

Claim 20, which depends upon Claim 19, further comprises a two-fold comparison system. Means are provided for comparing the partition key of an incoming data packet with the partition key of the end-to-end context, as described at Specification page 25 3rd full paragraph, and the corresponding structure is shown by representative elements HCA A and HCA B in Figure 8. If the partition keys match, means for comparing the reliable datagram domain of the queue pair with the reliable datagram domain of the end-to-end context, as described at Specification page 25 3rd full paragraph, and the corresponding structure is shown by representative elements HCA A and HCA

(Appeal Brief Page 8 of 24)
Neal et al. – 09/692,354

PAGE 10/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

B in Figure 8. If the reliable datagram domains match, means for processing the packet normally, as described at Specification page 25 3rd full paragraph, and the corresponding structure is shown by representative elements HCA A and HCA B in Figure 8.

E.   CLAIM 21 – DEPENDENT MEANS-PLUS-FUNCTION

Claim 21, which depends upon Claim 19, further comprises a conditional insertion of a partition key system. Means are provide for comparing the reliable datagram domain of the queue pair with the reliable datagram domain of the end-to-end context is provided, as described at Specification page 26 1st full paragraph, and the corresponding structure is shown by representative elements HCA A and HCA B in Figure 8. If the reliable datagram domains match, means for inserting the partitioning key of the end-to-end context into the transport header of the data packet as described at Specification page 26 1st full paragraph, and the corresponding structure is shown by representative elements HCA A and HCA B in Figure 8.

(Appeal Brief Page 9 of 24)
Neal et al. -- 09/692,354

PAGE 11/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   GROUND OF REJECTION 1 (Claims 1, 8-10 and 17-19)

Claims 1, 8-10 and 17-19 stand rejected under 35 U.S.C. § 103(a) as being obvious) over International Pub No. WO 00/72159 (Krause) in view of Shah et al. (US 6,694,361).

B.   GROUND OF REJECTION 2 (Claims 2-7, 11-16, 20 and 21)

Claims 2-7, 11-16, 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious) over International Pub No. WO 00/72159 (Krause) in view of Shah et al. (US 6,694,361) and further in view of Murayama ct al (US 5,617,424).

(Appeal Brief Page 10 of 24)
Neal et al. – 09/692,354

PAGE 12/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

ARGUMENT

A.   GROUND OF REJECTION 1 (Claims 1, 8-10 and 17-19)

A.1.   Claim 1, 10 and 19

In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. MPEP 2143.03. *See also, In re Royka*, 490 F.2d 580 (C.C.P.A. 1974). If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In the absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to Claim 1, Appellants urge that the Examiner has failed to properly establish a prima facie showing of obviousness. In particular, the Examiner has failed to establish, or even allege, that the cited references teach or suggestion storing a reliable datagram domain within *both* (i) the reliable datagram queue pair content *and* (ii) the end-to-end context. As can be seen, Claim 1 expressly recites that a reliable datagram domain is stored within *both* reliable datagram queue pair content *and* an end-to-end context. In rejecting Claim 1, the Examiner acknowledges that the cited Krause reference fails to teach queue pairs (page 8 of Office Action dated 08/06/2004). Because of this teaching deficiency, it necessarily follows that the cited Krause reference fails to teach or suggest storing a reliable datagram domain within both reliable datagram queue pair content and the end-to-end context (as there is no teaching of any queue pair). In an attempt to overcome this Krause teaching deficiency, the Examiner asserts that the cited Shah reference teaches a virtual interface which can contain work queues formed in pairs including a send queue and a receive queue. The Examiner goes on to state that Shah teaches a subnet manager responsible for various functions at the channel adapter including assigning unique addresses to all channel adaptor ports, and a partition manager as a part of the subnet manager that assigns partition keys to a fabric agent. Appellants urge that such assertions

(Appeal Brief Page 11 of 24)
Neal et al. – 09/692,354

PAGE 13/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

do not establish any teaching or suggestion that the cited Shah reference overcomes the above described teaching deficiency of Krause – and in particular does not establish a teaching or suggestion of storing a reliable datagram domain within BOTH (i) the reliable datagram queue pair content AND (ii) the end-to-end context, per Claim 1. Thus, the Examiner has failed to establish, or even allege, a prima facie showing of obviousness as the Examiner has failed to establish that all of the claim limitations are taught or suggested by the prior art, as required by MPEP 2143.03 and *In re Royka*, supra.

Still further with respect to Claim 1, the Examiner has failed to establish, or even allege, that the cited references teach or suggest storing *both* (i) the reliable datagram domain *and* (ii) a partition key within the end-to-end context. As can be seen, Claim 1 expressly recites that *both* the reliable datagram domain *and* a partition key are stored within an end-to-end context. In rejecting Claim 1, the Examiner acknowledges that the cited Krause reference fails to teach the storing of partition keys within end-to-end contexts (page 8 of Office Action dated 08/06/2004). Because of this teaching deficiency, it necessarily follows that the cited Krause reference fails to teach or suggest storing both a reliable datagram domain and a partition key within the end-to-end context. In an attempt to overcome this Krause teaching deficiency, the Examiner asserts that the cited Shah reference teaches a virtual interface which can contain work queues formed in pairs including a send queue and a receive queue. The Examiner goes on to state that Shah teaches a subnet manager responsible for various functions at the channel adapter including assigning unique addresses to all channel adaptor ports, and a partition manager as a part of the subnet manager that assigns partition keys to a fabric agent. Appellants urge that such assertions do not establish any teaching or suggestion that the cited Shah reference overcomes the above described teaching deficiency of Krause – and in particular does not establish a teaching or suggestion of storing BOTH (i) the reliable datagram domain AND (ii) a partition key within the end-to-end context. Thus, the Examiner has failed to establish, or even allege, a prima facie showing of obviousness as the Examiner has failed to establish that all of the claim limitations are taught or suggested by the prior art, as required by MPEP 2143.03 and *In re Royka*, supra.

As shown above, Claims 1, 10 and 19 have been erroneously rejected under 35 U.S.C. 103(a) as a proper prima facie case of obviousness has not been established by the Examiner. In addition, because of such failure to properly establish a prima facie showing of obviousness, the burden has not shifted to Applicants to rebut an obviousness assertion (*In re Oetiker, supra*).

(Appeal Brief Page 12 of 24)
Neal et al. – 09/692,354

A.2.   Claims 8, 9, 17 and 18

In addition to reasons given above regarding their respective independent claims, Appellants urge that none of the cited references teach the claimed feature of storing reliable datagram domain numbers for kernel code and user code, wherein the kernel reliable datagram domain *can only be used by kernel code* (Claim 8); or storing reliable datagram domain numbers for kernel code and consumer processes, wherein the kernel reliable datagram domain *can only be used by kernel code* (Claim 9). In rejecting Claim 8, the Examiner states that the cited Krause references fails to teach this claimed feature, but goes on to state that the cited Shah reference teaches separation of the OS system kernel and the host channel adapter and its associated driver stack at Shah Figure 5. Per the Examiner, this separation allows bypassing the kernel and accessing the host channel adapter "directly by the users or the consumer processes" as the host channel adapter is provided to access the switched fabric directly. Appellants respectfully show error, as Claim 8 and 9 abhor such direct user access in that such claims recite wherein the kernel reliable datagram domain *can only be used by kernel code*. An alleged teaching of *direct user access* does not establish a teaching or suggestion of restricted kernel usage of a reliable datagram domain, and thus Claims 8 and 9 (and similarly for Claims 17 and 18) have been erroneously rejected as a proper prima facie showing of obviousness has not been established by the Examiner.

As shown above, Claims 8, 9, 17 and 18 have been erroneously rejected under 35 U.S.C. 103(a) as a proper prima facie case of obviousness has not been established by the Examiner. In addition, because of such failure to properly establish a prima facie showing of obviousness, the burden has not shifted to Applicants to rebut an obviousness assertion (*In re Oetiker, supra*).

B.   GROUND OF REJECTION 2 (Claims 2-7, 11-16, 20 and 21)

B.1.   Claims 2, 11 and 20

In addition to reasons given above regarding their respective independent claims, Appellants urge that none of the cited references teach or suggest the claimed feature of "wherein a consumer process cannot directly access the reliable datagram domain". In rejecting Claim 2, the Examiner acknowledges that the cited Krause and Shah references do not teach this claimed

feature, but states that the cited Murayama reference teaches a receiving side that checks the key in the packet that has arrived and the key in the communication region. Appellants urge that such key checking is not with respect to a reliable datagram domain, and thus this assertion does not establish a teaching or suggestion of a consumer process that cannot directly access a reliable datagram domain.

As shown above, Claims 2, 11 and 20 have been erroneously rejected under 35 U.S.C. 103(a) as a proper prima facie case of obviousness has not been established by the Examiner. In addition, because of such failure to properly establish a prima facie showing of obviousness, the burden has not shifted to Applicants to rebut an obviousness assertion (*In re Oetiker, supra*).

B.2.   Claims 3-5 and 12-14

In addition to reasons given above regarding their respective independent claims, Appellants urge that none of the cited references teach or suggest the claimed two-part comparison operations recited in Claim 3. Claim 3 includes two comparing steps, with one of such comparison operations conditionally being made depending upon the results of the first comparision step. Specifically, Claim 3 recites a step of comparing the partition key of an incoming data packet with the partition key of the end-to-end context. *If the partition keys match*, the reliable datagram domain of the queue pair is compared with the reliable datagram domain of the end-to-end context. The cited references do not teach/suggest such two part comparison, where the second comparing step is conditioned upon the results of the first comparing step. In rejecting Claim 3, the Examiner asserts that Murayama teachings that as a result of comparing two keys, "the packet is transferred to a physical address according to the receive region assignment". This allegation does not establish a teaching/suggestion of conditionally comparing a reliable datagram domain of a queue pair with a reliable datagram domain of an end-to-end context, as expressly recited in Claim 3. Thus, the Examiner has failed to properly establish a prima facie showing of obviousness with respect to Claim 3 (and similarly for Claims 4, 5 and 12-14), which is thus shown to have been erroneously rejected due to such failure.

As shown above, Claims 3-5 and 12-14 have been erroneously rejected under 35 U.S.C. 103(a) as a proper prima facie case of obviousness has not been established by the Examiner. In addition, because of such failure to properly establish a prima facie showing of obviousness, the

burden has not shifted to Applicants to rebut an obviousness assertion (*In re Oetiker, supra*).

B.3.   Claims 6, 7, 15, 16 and 21

Appellants urge that none of the cited references teach or suggest the claimed feature of "if the reliable datagram domains match, inserting the partitioning key of the end-to-end context into the transport header of the data packet". In rejecting Claim 6, the Examiner states that while the cited Krause and Shay references fail to teach this claimed feature, the cited Murayam teaches "determination a key that designates the access right to the communication region in the transmitting and receiving of data. Thus the outgoing packet is assigned with assigned receiving region and a security key where both of these components go through comparison process for their validity". Appellants urge that even assuming such assertion to be true, this still does not establish a teaching/suggestion of conditional insertion of a partitioning key of the end-to-end context into the transport header of the data packet – such conditional insertion being based upon *whether the reliable datagram domains match*. Thus, Claim 6 (and similarly for Claims 7, 15 and 16) is further shown to have been erroneously rejected under 35 USC 103 as a proper prima facie case of obviousness has not been established by the Examiner.

As shown above, Claims 6, 7, 15, 16 and 21 have been erroneously rejected under 35 U.S.C. 103(a) as a proper prima facie case of obviousness has not been established by the Examiner. In addition, because of such failure to properly establish a prima facie showing of obviousness, the burden has not shifted to Applicants to rebut an obviousness assertion (*In re Oetiker, supra*).

CONCLUSION

In summary, it has been shown how the present invention provides association of reliable datagram queue pairs with end-to-end context(s), thus eliminating any requirement to associate the reliable datagram queue pairs to a specific partition, and instead allowing use of a partition association of the underlying end-to-end context – thereby allowing reliable datagram queue pairs to communicate on multiple partitions.

It is respectfully submitted that the Examiner has erred in the final rejection of all claims in the present application, and Appellants accordingly request that the Board reverse the rejection of all such claims.

Duke W. Yee
Reg. No. 34,285
Wayne P. Bailey
Reg. No. 34,289
YEE & ASSOCIATES, P.C.
PO Box 802333
Dallas, TX 75380
(972) 385-8777

(Appeal Brief Page 16 of 24)
Neal et al. – 09/692,354

CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1.   A method for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter, comprising:

storing a reliable datagram domain within the reliable datagram queue pair context;

storing the same reliable datagram domain within the end-to-end context; and

storing a partition key within the end-to-end context.

2.   The method according to claim 1, wherein a consumer process cannot directly access the reliable datagram domain.

3.   The method according to claim 1, in the case of incoming messages, further comprising:

comparing the partition key of an incoming data packet with the partition key of the end-to-end context;

if the partition keys match, comparing the reliable datagram domain of the queue pair with the reliable datagram domain of the end-to-end context; and

if the reliable datagram domains match, processing the packet normally.

4.   The method according to claim 3, wherein the step of comparing the partition keys of the packet and end-to-end context further comprises processing the packet according to InfiniBand partitioning semantics, if the partition keys do not match.

(Appeal Brief Page 17 of 24)
Neal et al. – 09/692,354

PAGE 19/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

5. The method according to claim 3, wherein the step of comparing the reliable datagram domains of the queue pair and end-to-end context further comprises:

giving a negative acknowledgment to the data packet, if the reliable datagram domains do not match; and

placing the send queue in an error state.

6. The method according to claim 1, in the case of outgoing messages, further comprising:

comparing the reliable datagram domain of the queue pair with the reliable datagram domain of the end-to-end context; and

if the reliable datagram domains match, inserting the partitioning key of the end-to-end context into the transport header of the data packet.

7. The method according to claim 6, further comprising: completing the packet in error, if the reliable datagram domains do not match; and

placing the send queue in an error state.

8. The method according to claim 1, further comprising storing reliable datagram domain numbers for:

kernel code; and

user code;

wherein the kernel reliable datagram domain can only be used by kernel code.

9.   The method according to claim 1, further comprising storing reliable datagram domain numbers for:

kernel code; and

consumer processes;

wherein the kernel reliable datagram domain can only be used by kernel code.

10.   A computer program product in a computer readable medium for use in a data processing system for associating reliable datagram queue pairs with an underlying end-to-end context of a channel adapter, the computer program product comprising:

instructions for storing a reliable datagram domain within the reliable datagram queue pair context;

instructions for storing the same reliable datagram domain within the end-to-end context; and

instructions for storing a partition key within the end-to-end context.

11.   The computer program product according to claim 10, wherein a consumer process cannot directly access the reliable datagram domain.

12.   The computer program product according to claim 10, in the case of incoming messages, further comprising:

instructions for comparing the partition key of an incoming data packet with the partition key of the end-to-end context;

if the partition keys match, instructions for comparing the reliable datagram domain of

the queue pair with the reliable datagram domain of the end-to-end context; and

if the reliable datagram domains match, instructions for processing the packet normally.

13.   The computer program product according to claim 12, wherein the instructions for

comparing the partition keys of the packet and end-to-end context further comprise instructions

for processing the packet according to InfiniBand partitioning semantics, if the partition keys do

not match.

14.   The computer program product according to claim 12, wherein the instructions for

comparing the reliable datagram domains of the queue pair and end-to-end context further

comprises:

instructions for giving a negative acknowledgment to the data packet, if the reliable

datagram domains do not match; and

instructions for placing the send queue in an error state.

15.   The computer program product according to claim 10, in the case of outgoing messages,

further comprising:

instructions for comparing the reliable datagram domain of the queue pair with the

reliable datagram domain of the end-to-end context; and

instructions for if the reliable datagram domains match, inserting the partitioning key of

the end-to-end context into the transport header of the data packet.

16.   The computer program product according to claim 15, further comprising:

instructions for completing the packet in error, if the reliable datagram domains do not

match; and

instructions for placing the send queue in an error state.

17.   The computer program product according to claim 10, further comprising instructions for

storing reliable datagram domain numbers for:

kernel code; and

user code;

wherein the kernel reliable datagram domain can only be used by kernel code.

18.   The computer program product according to claim 10, further comprising instructions for

storing reliable datagram domain numbers for:

kernel code; and

consumer processes;

wherein the kernel reliable datagram domain can only be used by kernel code.

19.   A system for associating reliable datagram queue pairs with an underlying end-to-end

context of a channel adapter, comprising:

means for storing a reliable datagram domain within the reliable datagram queue pair

context;

means for storing the same reliable datagram domain within the end-to-end context; and

means for storing a partition key within the end-to-end context.

20.   The system according to claim 19, in the case of incoming messages, further comprising:

means for comparing the partition key of an incoming data packet with the partition key of the end-to-end context;

if the partition keys match, means for comparing the reliable datagram domain of the queue pair with the reliable datagram domain of the end-to-end context; and

if the reliable datagram domains match, means for processing the packet normally.

21.   The system according to claim 19, in the case of outgoing messages, further comprising:

means for comparing the reliable datagram domain of the queue pair with the reliable datagram domain of the end-to-end context; and

if the reliable datagram domains match, means for inserting the partitioning key of the end-to-end context into the transport header of the data packet.

(Appeal Brief Page 22 of 24)
Neal et al. – 09/692,354

PAGE 24/26 * RCVD AT 12/28/2004 2:50:04 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:9723857766 * DURATION (mm-ss):06-24

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.